## REMARKS

Claims 1-21 are presented for examination. Claims 19-21 have been added to provide Applicants with a more complete scope of protection. Claims 1, 16 and 19 are in independent form. Favorable reconsideration is requested.

Independent Claim 19 is directed to a liquid ejection recording head for effecting recording by ejecting a first liquid and a second liquid which is a different liquid through different ejection outlets, while bi-directionally scanning a recording material in a scanning direction. The liquid ejection recording head comprises a first group of ejection outlet arrays each of which has a plurality of ejection outlets at predetermined intervals arranged in a direction different from the scanning direction, with corresponding ejection outlets in the respective ejection outlet arrays of the first group aligned in the scanning direction. The liquid ejection recording head further comprises a second group of ejection outlet arrays each of which has a plurality of ejection outlets at predetermined intervals arranged in a direction different from the scanning direction, again with corresponding ejection outlets in the respective ejection outlet arrays of the second group aligned in the scanning direction. The second group is disposed adjacent to the first group. The liquid ejection recording head further comprises a plurality of energy conversion element array groups for ejecting the first liquid from the first ejection outlet array group and a plurality of energy conversion element array groups for ejecting the second liquid from the second ejection outlet array group. The first ejection outlet array group includes a first ejection outlet array for ejecting the first liquid and a second ejection outlet array for ejecting the second liquid. The second ejection outlet array group includes a third ejection outlet array for ejecting the first liquid and a fourth ejection outlet array for ejecting the second liquid. The first ejection outlet array group and the second ejection outlet array group are

disposed such that the first ejection outlet array and the third ejection outlet array are adjacent to each other and such that the ejection outlets of the first ejection outlet array and the ejection outlets of the third ejection outlet array are disposed with a deviation in a direction of arrangement of the ejection outlets so as to be complementary to each other in the scanning direction. The energy conversion element array groups for ejecting the first liquid from the first ejection outlet array group and the energy conversion element array groups for ejecting the second liquid from the second ejection outlet array group are provided on a common substrate.

Among other important features of Claim 19, is that, in the above-described liquid ejection recording head, corresponding ejection outlets in the respective ejection outlet arrays of the first group are aligned in the scanning direction, and corresponding ejection outlets in the respective ejection outlet arrays of the second group are aligned in the scanning direction. A second important feature of Claim 19 is that, in the above-described liquid ejection recording head, the energy conversion element array groups for ejecting the first liquid from the first ejection outlet array group and the energy conversion element array groups for ejecting the second liquid from the second ejection outlet array group are provided on a common substrate.

An example of the above-mentioned first feature of Fig. 19 is illustrated in Applicants' Fig. 1(a) (see also the specification beginning at page 17, line 14).[1] Fig. 1(a) shows a first group 20 of ejection outlet arrays and a second group 30 of ejection outlet arrays. First group 20 includes ejection outlet arrays 21, 22 and 23, and second group 30 includes ejection outlet arrays 31, 32 and 33. As shown in the figure, corresponding ejection outlets in ejection outlet arrays 21, 22 and 23 of first group 20 are aligned in the scanning direction (i.e., along the

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1/Of course, the claims are not to be taken as being limited by the detail of the figures or examples.

along the dashed line i in the figure). Likewise, corresponding ejection outlets in ejection outlet arrays 31, 32 and 33 of second group 30 are aligned in the same fashion.

Applicants submit that Claim 19 is patentable over the references applied against the claims in the last Office Action, namely, EP 0 955 174 (*Quintana*) and U.S. Patent 6,315,387 (*Horikoshi*).

According to Applicants' understanding, (*Quintana*) relates to bidirectional printing with controlled hue shifts. However, Applicants submit that this reference does not teach or suggest the two highlighted features of Claim 19. As shown clearly in *Quintana*'s Fig. 7, the nozzles of every other row are aligned in the scanning direction, and the nozzles of any two adjacent rows are staggered in the scanning direction. Thus, the corresponding nozzles of left rows 40, 38, 36 and 34 are not aligned in the scanning direction. For example, the corresponding nozzles of left rows 40 and 36 are not aligned with those of left rows 38 or 34. The same lack of alignment holds with respect to the corresponding nozzles of right rows 40, 38, 36 and 34. This does not suggest corresponding ejection outlets of different arrays of a first group, all aligned with each other, and corresponding ejection outlets of different arrays of a second group, all aligned with each other, with the ejection outlets of an array of the first group being staggered with respect to those of an adjacent array of the second group, as recited in Claim 19.

*Horikoshi* relates to a multipath/double-head printing apparatus.

Applicants note that the Office Action did not cite *Horikoshi* for a feature such as the above-discussed first feature of Claim 19, and Applicants submit that nothing in *Horikoshi* would teach or suggest this feature.

As for the above-discussed second feature of Claim 19, even if *Horikoshi* mentions an electrothermal energy converter and a piezoelectric element, Applicants submit that nothing in *Horikoshi* would teach or suggest the feature that, in a liquid ejection recording head, energy conversion element array groups for ejecting a first liquid from a first ejection outlet array group and energy conversion element array groups for ejecting a second liquid from a second ejection outlet array group are provided on a common substrate.

Even if *Quintana* and *Horikoshi* were combined, therefore, the result would not have all of the elements of Claim 19. Accordingly, that claim is believed allowable over those references.

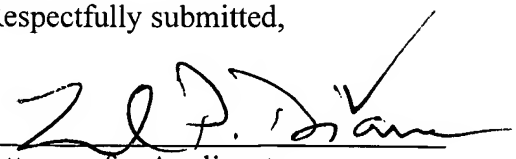
A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against independent Claim 19. This claim is therefore believed patentable over the art of record.

Claims 20 and 21 are each dependent from Claim 19 and are therefore believed patentable for the same reasons. Since each of these dependent claims is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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